

N° 30,303

A.D. 1909



(Under International Convention.)

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PATENT OFFICE

Date claimed for Patent under Patents and Designs
Act, 1907, being date of first Foreign Appli- } 19th Apr., 1909
cation (in France),

Date of Application (in the United Kingdom), 28th Dec., 1909

At the expiration of twelve months from the date of the first Foreign Appli-
cation, the provision of Section 91 (3) (a) of the Patents and Designs Act,
1907, as to inspection of Specification, became operative

Accepted, 5th May, 1910

COMPLETE SPECIFICATION.

Apparatus for Filtering or Straining Water or other Liquids or Fluids.

I, EMILE GOMMI, of 4, rue Duchesnay, Asnières (Seine), France, Engineer,
do hereby declare the nature of this invention and in what manner the same
is to be performed, to be particularly described and ascertained in and by the
following statement:—

- 5 The present invention relates to filtering apparatus for the purification of
water and other liquids or fluids, comprising filtering elements constituted
by a spiral metallic ribbon or plate, so that the spirals are superposed, these
spirals having on one side interstices separating each of the turns of the spiral,
by which the filtration is effected.
- 10 The elements of this filter, with their regular interstices, permit, for example,
colloidal globules of known diameter to be obtained, the output of the filter
to be increased and its cleaning to be effected by the return of the filtered liquid.
In the accompanying drawing
Figure 1 is a plan on an enlarged scale showing by way of example, a portion
15 of ribbon forming part of an element of this improved filter.
Figure 2 represents in vertical section some superposed plates of this filtering
element also on an enlarged scale.
In order to obtain in a regular manner the interstices separating the filtering
elements constituted by a metallic spiral of flat section for example, the plate
20 destined to constitute this spiral can be rendered rugous by the action of any
corrosive acid. This corrosion can be more or less deep by leaving the plate
for a greater or less time in the acid. The filtering elements thus obtained have
the advantage of giving a filtration analogous to that given by porous bodies
without inconvenience arising through want of homogeneousness.
- 25 In making these filtering elements it is also possible to utilise the property
which certain metals have of recovering under the action of heat, their primitive
rugous molecular state, after this state has been modified during their manu-
facture, so that elements thus treated present rugosities which will be still more
pronounced when their primitive crystalline state has been reconstructed in a
more perfect manner.
Again the said filtering elements may be made by rolling them so as to
produce artificially, on one of the faces of the plate *a*, transverse rectilinear
ribs *b* spaced at a certain distance one from the other, as shown in Figure 1.

[Price 8d.]

Apparatus for Filtering or Straining Water or other Liquids or Fluids.

These projections or ribs being all made the same height and resting in the spiral immediately below (Figure 2) which is smooth on that side, form interstices between the spirals of which the size varies with the distance separating these projections and with their height. The said projections can easily be reduced in height by repassing the plate between two smooth and polished rollers. In this manner ultramicroscopic interstices will be created which will permit colloidal globules being obtained with precision in a suitable liquid.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is:—

Apparatus for the purification of water and other liquids or fluids having filtering elements constituted by a spiral metallic ribbon or plate, so that the spirals thereof are superposed, these spirals having on one side interstices which separate them one from the other and through which the filtration is effected, these interstices being obtained either by the action of a corrosive acid, or by reheating or by suitable rolling.

Dated this 28th day of December, 1909.

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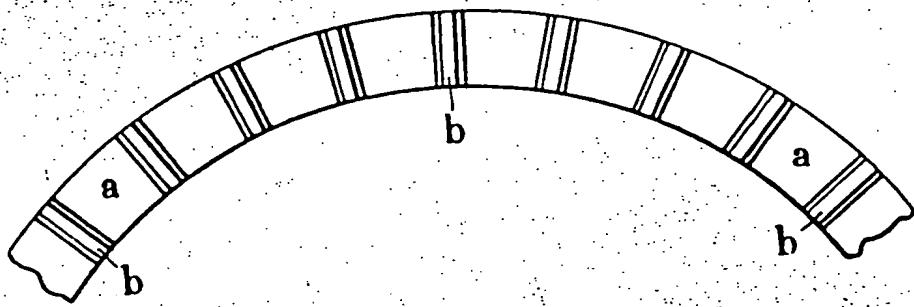
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Fig.1.



[This Drawing is a reproduction of the Original on a reduced scale.]

Fig.2.

